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September 5, 2013

Ms. Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423

Re: STB Docket No. EP 431 (Sub-No. 4), *Review of the General Purpose Costing System*

Dear Ms. Brown:

Pursuant to the Notice of Proposed Rulemaking and subsequent decisions served in this proceeding, attached please find the Association of American Railroads' reply comments for filing.

In addition, we will separately hand deliver a compact disc containing confidential workpapers for filing under seal. These workpapers contain confidential waybill information.

Respectfully submitted,

Timothy J. Strafford
Counsel for the Association of
American Railroads

BEFORE THE
SURFACE TRANSPORTATION BOARD

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STB Ex Parte No. 431 (Sub-No. 4)

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REVIEW OF THE GENERAL PURPOSE COSTING SYSTEM

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# REPLY COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS

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BEFORE THE
SURFACE TRANSPORTATION BOARD

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STB Ex Parte No. 431 (Sub-No. 4)

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REVIEW OF THE GENERAL PURPOSE COSTING SYSTEM

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# REPLY COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS

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Pursuant to the schedule established in the Notice of Proposed Rulemaking ("NPR") and subsequent decisions served in this proceeding[1] by the Surface Transportation Board ("Board"), the Association of American Railroads ("AAR") respectfully submits these reply comments. In support of these reply comments, the AAR also submits the Verified Reply Statement of Michael R. Baranowski and Benton V. Fisher, Senior Managing Directors of FTI Consulting ("Baranowski/Fisher Reply V.S.") as Appendix A. The AAR filed its initial comments in this proceeding on June 20, 2013.

## Introduction and Summary

The Board's stated goals to eliminate the step-function effect of the make-whole adjustment and more accurately calculate the system average unit costs in the Uniform Railroad Costing System ("URCS") are laudable. However, the AAR shares the concerns expressed by both shippers and railroads in their opening comments that the proposals in the NPR are not supported by empirical data that show that the proposed changes would result in more accurate

[1] The Board extended the procedural schedule in a decision served on March 12, 2013, and granted the AAR's request for clarification and additional data in a decision served on April 25, 2013.

costing. The Board's increasing reliance on unadjusted URCS variable costs in recent years[2] has increased the importance that the Board's general costing system be grounded in real world, empirical data. Moreover, the AAR's freight railroad members have a strong interest in an accurate costing system that reflects, to the maximum extent possible, real-world data. Unlike shippers of particular commodities or particular train types, who may have incentives to seek changes to URCS with a narrow outcome in mind, the goal of the railroads is to improve the overall accuracy of URCS, because URCS impacts them broadly and in a variety of different contexts. The mix of regulated traffic, together with the many uses that the Board utilizes URCS for and the interconnectedness of the costing system itself make it difficult, if not impossible, to allow the railroads to benefit consistently from selected changes to URCS.

In the reply comments that follow, the AAR responds to the opening comments filed in this proceeding and refines its proposals to reflect its continuing review of the information released by the Board.[3] This release of information allowed the public, for the first time, to learn how the make-whole adjustment has been calculated and understand some of the assumptions underlying URCS.

The AAR agrees with shipper comments that argue that adoption of the NPR's proposals

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[2] *See Total Petrochemicals & Refining USA, Inc. v. CSX Transportation, Inc.*, NOR 42121 (STB served July 19, 2011) (applying an URCS-based "limit price" rule for qualitative market dominance analysis); *Entergy Ark. Inc. and Entergy Serv. Inc. v. Union Pac. R.R. and Mo. & N. Ark. R.R.*, FD 42104, slip op at 12-14 (STB served Mar. 15, 2011), *recon. denied, Entergy Ark. Inc. and Entergy Serv. Inc. v. Union Pac. R.R. and Mo. & N. Ark. R.R.*, slip op. at 11-13 (STB served Nov. 26, 2012) (utilizing URCS in routing analysis under 49 U.S.C. § 10705). *See also Petition for Rulemaking to Adopt Revised Competitive Switching Rules*, EP 711, slip op. at 4 (STB served July 25, 2013) (noting National Industrial Traffic League's proposal relies on a comparison of revenues to URCS variable costs as a trigger for forced switching).

[3] By a decision served in this proceeding on April 25, 2013, the Board allowed interested parties access to: (1) the uncosted 2011 Carload Waybill Sample; (2) the source code used to cost the Waybill Sample; (3) both the intermediate outputs that result from using the source code when costing the Waybill Sample, and the costed 2011 Waybill Sample; (4) a spreadsheet of a small record set that serves as an example of how the make-whole adjustment is calculated; and (5) a description of the changes in the calculations of certain Phase III line items to reflect the NPR proposals.

would alter long-standing costing relationships derived from historical studies and are not supported by empirical data. The AAR submits that, if the Board proceeds to eliminate the step-function effect of the make-whole adjustment without conducting new studies, the Board should retain the existing cost relationships in URCS by adopting the methodology developed in the AAR's opening comments, as supplemented herein. For the reasons discussed below, the Board should not adopt the proposals for other changes to URCS advocated by shipper groups in the opening comments. Finally, the Board should take this opportunity to consider the unique costs associated with toxic-by-inhalation hazards ("TIH") and other hazardous materials.

## Discussion

### I. The Opening Comments Filed In This Proceeding Show The Proposed Rules Would Alter The Existing URCS Cost Relationships Without Any Empirical Analysis Demonstrating That Costs Would Be More Accurate.

The common theme running throughout the opening comments filed in this proceeding by shippers and railroads alike is that the specific proposals in the NPR lack empirical support. The Joint Comments of the American Chemistry Council, the Chlorine Institute, the Fertilizer Institute, and the National Industrial Transportation League ("ACC *et al.*") note that the existing URCS costing procedures were adopted based on detailed studies of railroad operations and that the NPR proposals lack similar empirical analysis.[4] ACC *et al.* also argue that the NPR's "proposals are predicated upon flawed assumptions that will distort the URCS calculations and lead to less accurate results."[5] The Tom O'Connor Group also notes the lack of economic support for the proposals.[6] Further, the Western Coal Traffic League ("WCTL") notes that the

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[4] *Id.* at 5.

[5] ACC *et al.* Opening Comments at 2.

[6] The Tom O'Connor Group Opening Comments at 6.

NPR does not adequately explain how the proposed changes would be implemented.[7] ACC *et al.* conclude that adopting the NPR proposals without empirical support would be arbitrary and capricious.[8]

The Board has an obligation under the Administrative Procedure Act to supply a reasoned basis for departing from its current rules regarding URCS.[9] Moreover, the Rail Transportation Policy calls on the Board to "ensure the availability of accurate cost information in regulatory proceedings, while minimizing the burden on rail carriers of developing and maintaining the capability of providing such information." 49 U.S.C. § 10101(13). In the past, the Board has recognized that it should not embark on changes to URCS without reasoned analysis of empirical data that would support those changes.[10]

The AAR shares the concerns expressed in the shipper and railroad opening comments and submits that the Board should not embark on changes to URCS that alter the fundamental cost relationships in URCS without substantial data showing that the changes would result in more accurate costing. As explained in the AAR opening comments, the NPR proposals would sever the link to special studies establishing these unit costs without any analysis demonstrating that the new methodology is more accurate. The AAR continues to believe that the best way to establish an accurate costing methodology to account for the efficiencies associated with higher volume shipments is to undertake special studies that would establish a data-driven basis for such a change.[11]

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[7] WCTL Opening Comments at 7.

[8] ACC *et al.* opening Comments at 11 (citing *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009)).

[9] *See, e.g., Nat'l Assoc. of Home Builders v. EPA*, 682 F.3d 1032, 1037 (D.C. Cir 2012).

[10] *Review of the General Costing System*, 2 S.T.B. 659, 665 (1997).

[11] AAR Opening Comments at 12.

## I. If the Board Adopts New Rules To Eliminate the Step-Function Effect of the Make-Whole Adjustment, It Should Maintain the Existing Cost Relationships And Correct Existing Flaws in URCS.

In its opening comments, the AAR explained that if the Board viewed it as impractical to conduct special studies to establish accurate unit costs, the Board could eliminate the step-function effect of the make-whole adjustment without severing the link between the historical special studies and Phase II unit costs.[12] As demonstrated by Messrs. Baranowski and Fisher, the Board can eliminate the step-function effect of the make-whole adjustment while retaining the underlying cost relationships derived from special studies, in effect smoothing out the resulting costs on a curve. In addition, the Board should correct obvious flaws in the model.[13]

With regard to the proposed changes related to the make-whole adjustment, the AAR suggested that breaking Switch Engine Minutes (SEM) and Station Clerical costs into event related (shipment) and time related (number of cars) components would maintain the existing cost relationships in URCS. But the challenge of determining exactly what the breakdown should be is complicated by the lack of clarity surrounding the definition of shipment in the NPR. While relying on waybill information may be straightforward for unit trains,[14] it is more complicated for commodities that travel in less than trainload shipments. ACC *et al.* correctly note that there is currently no standard for tracking or reporting railroad shipments, and without a standard, railroads do not know whether they have the data that would need to be collected to comply with the standard.[15] ACC *et al.* echo the AAR's opening comments that the information

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[12] AAR Opening Comments at 13-17.

[13] Baranowski/Fisher Reply V.S. at 4-6, 10-13.

[14] WCTL Opening Comments at 8.

[15] ACC et al. Opening Comments at 7-8.

contained on waybills does not always reflect how the traffic moves operationally for some types of traffic, such as intermodal.[16]

*SEM Costs*. The AAR demonstrated in its opening comment that a split that assigns 70 percent of costs on a shipment basis and 30 percent on a per-car basis would preserve the current cost relationships in URCS.[17] That conclusion rests on assumptions about how the Board would define what constitutes an intermodal shipment. As demonstrated in the Baranowski/Fisher Reply V.S., the definition of what constitutes an intermodal shipment will affect the split of per-shipment/per-car costs, to some degree.

*Station Clerical Costs*. In its opening comments, the AAR explained that the NPR's proposal to convert station clerical costs to a per-shipment approach was unsupported by empirical data, incorrectly assumed that all such costs were independent of the number of cars in the shipment, and would change existing cost relationships that were developed by historical studies. As demonstrated by Messrs. Baranowski and Fisher, a hybrid approach that recognizes that a portion of the station clerical costs varies with the size of the shipment[18] would assign 24 percent of the costs on the basis of shipments and 76 percent on the basis of carloads, while still preserving the relative assignment of costs between larger-sized and smaller-sized shipments used by URCS today.[19]

The AAR's review of the released URCS material has revealed that a further refinement to the assignment of station clerical costs in URCS may also be warranted because the current approach appears to double count those costs for intermodal shipments. While carload and

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[16] *Id.* at 8; AAR Opening Comments at 14.

[17] AAR Opening Comments at 15-16.

[18] AAR Opening VS at 16-17.

[19] Baranowski/Fisher Reply V.S. at 13.

intermodal shipments are each assigned station clerical costs, intermodal traffic is also assigned waybilling and administrative expenses through another URCS unit cost. URCS assigns the intermodal waybilling and administrative expenses exclusively to originations or terminations of intermodal shipments.[20] As these expenses include administrative and other costs that are associated directly with intermodal shipments, there does not appear to be a need to also allocate to intermodal shipments a share of the Administrative Support expenses that comprise the station clerical cost. Before making any changes to the manner in which URCS distributes station clerical costs to carload and intermodal shipments, the Board should confirm that URCS allocations are aligned with the reporting of expenses.[21]

*Railroad-Owned Car Costs.* Another flaw revealed by the AAR's review of the materials released by the Board is related to railroad-owned car costs. The efficiency adjustments made for railroad-owned cars result in the "savings" for higher volume shipments in certain types of cars being added back onto other car types that move lower volume shipments. Because these costs are comprised primarily of ownership and lease costs specific to a given car type, the make-whole is, in effect, distributing car costs for one car type to shippers using a different car type. This is markedly different than other types of costs for which the railroads do not report accounting information, such as switching costs, which are derived through calculations that rely on historical information. Whether or not the Board decides to proceed with its proposals, this misallocation should be addressed.

*LUM Costs.* WCTL's support for the two proposed changes to LUM costs appear to be based on its desired outcome rather than a principled examination of the NPR's proposal.[22] The

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[20] URCS Worktable D7 Part 7A.

[21] Baranowski/Fisher Reply V.S. at 13-14.

[22] WCTL Opening comments at 13.

AAR Opening comments noted that both proposed changes would serve to remove certain refinements in the allocation of LUM costs to trainload shipments and to non-trainload shipments. For unit trains, the current scaling factor adjusts locomotive costs based on the relative weight of the shipment being costed to the system-average unit-train weight. This approach better reflects the cost of heavier trains, which require more horsepower to move than smaller, lighter trains than the NPR's new "one size fits all" proposal. With respect to non-trainload movements, scaling the locomotive costs assigned to non-unit train shipments to 80 cars because it is the (proposed) unit train threshold does not eliminate the step-function – it merely moves the step from 50 to 80 cars.[23]

*Other Flaws in URCS.* In its opening comments the AAR advocated that the Board correct two other flaws in URCS. First, the AAR identified a flaw with Interterminal and Intraterminal Switching costs. Second, the AAR identified a flaw with Intertrain and Intratrain – or "I&I" – switching accounts for intermediate switching and blocking of cars that is performed en route.

The AAR opening comments explained that carriers did not report Interterminal and Intraterminal switching, and that the URCS model currently assigned a portion of total switching time – and, as a result, switching costs – to Interterminal and Intraterminal switching. The URCS costing process did not assign these costs to any shipments in the Carload Waybill Sample. Further review of the "source code" underlying the Board's URCS costing process indicates that a small fraction of these costs are, in fact, assigned to traffic. The programs suggest that Interterminal and Intraterminal costs would be applied to shipments of less than 9 miles on a carrier. A disproportionately small fraction of costs are allocated in Phase II, leaving

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[23] Baranowski/Fisher Reply V.S. at 14.

more than $410 million unassigned. The Board should revisit the assignment of switching time and costs to Interterminal and Intraterminal switching in URCS to correct this flaw.[24]

The URCS model does not assign any I&I switching costs to unit trains, and very little to intermodal shipments.[25] The AAR opening comments observed that the Board, in proposing to eliminate the make-whole adjustments, left unclear how it would redistribute the savings from I&I switching. Currently, the URCS Phase II allocates switching minutes to the I&I function by assuming that all traffic receives an I&I switch every 200 miles (loaded or empty) and then, via the make-whole, redistributes the savings from the elimination of I&I switches for trainload shipments to non-unit train, non-intermodal shipments.[26] If the Board decides to eliminate the step-function effect of the make-whole adjustment, the Board should also propose a process within URCS to account for the fact that trainload shipments incur no I&I switching.

## II. The Board Should Not Adopt Other Changes to URCS Proposed By Shippers In The Opening Comments.

The Board should not adopt any of the other proposals raised by shipper groups in the opening comments. Many proposals are simply reiterations of arguments raised in past proceedings and do not require extensive consideration by the Board as they are outside the scope of this proceeding, which was instituted to address the step-function effect caused by the make-whole adjustment. Moreover, the AAR shares the view of ACC *et al.* that the Board should not embark on piecemeal attempts to improve URCS without a strong foundation of data

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[24] *See* URCS Worktable B6 Part 2A. AAR Opening VS at 13.

[25] Baranowski/Fisher Reply V.S. at 9.

[26] *Id.* The AAR Opening Comments noted that the Board's current URCS process fails to properly incorporate the longer interval between I&I events for intermodal traffic, resulting in the failure to assign all switching costs across all carriers. AAR Opening Comments at 20-21.

showing that the changes make the model more accurate. [27] As UP pointed out in its opening comments, such an approach would be complicated by the need for consistency in the use of multiple years of costed waybill data in the RSAM and $R/VC_{>180}$ benchmarks.[28]

AECC raises a number of proposals that reflect a misunderstanding of aspects of URCS. For example, URCS does not currently assign proportionally more train and engine crew wage costs to longer or heavier trains as claimed by AECC; it assigns the same cost per mile to all trainload moves.[29] AECC is also critical of how URCS treats fuels costs related to unit trains. But, as demonstrated by Messrs. Baranowski and Fisher, its claims are without merit.[30] AECC mischaracterizes the relative efficiency of unit trains, and misrepresents the existing assignment of fuel costs to unit trains in URCS. In addition, in order to generate an estimate of the relative difference in fuel costs between unit trains and "average traffic," AECC simply excludes all fuel costs associated with switching.[31]

AECC also claims that road property depreciation costs are assigned improperly to shipments to which they do not apply. Predictably, AECC focuses only on those costs that it alleges are not incurred by unit coal trains, but ignores those costs that such trains incur that other types of movements do not. Moreover, AECC's specific example of costs related to intermodal facilities is incorrect; all intermodal terminal investment and depreciation are

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[27] One aspect of the argument made by ACC *et al.* is flawed, however. The claim that moving to per-shipment costs creates a disconnect with the variability factor is incorrect. *See* ACC et al. Opening comments at 8. Variability factors are determined based on total switching time, and not a function of costs that are calculated on a per car basis. Baranowski/Fisher Reply V.S. at 18.

[28] UP Opening Comments at 18.

[29] Baranowski/Fisher Reply V.S. at 19.

[30] Baranowski/Fisher Reply V.S. at 22-24.

[31] AECC Comments at 18-19.

reported to separate road property accounts and assigned only to intermodal originations and terminations.[32]

In addition, AECC's call to eliminate road property investment entirely from variable costs is misguided. URCS has included the return on investment since its inception. As explained by Messrs. Baranowski and Fisher, roadway assets are variable with traffic levels, as increased traffic requires carriers to invest in increased track capacity – either double-tracking or adding passing sidings on mainlines, or adding or lengthening tracks in yards. AECC fails to recognize this basic association between traffic levels and asset investments.[33]

Finally, the Alliance for Rail Competition et al. ("ARC") allege the fact that 88.6% of the records for grain shipments in the 2011 Public Use Waybill Sample are single-car movements is the result of "railroad accounting practices of questionable validity."[34] In fact, the records in the Waybill Sample are derived from actual carload waybills. That information originates with the shipper, not the railroad. Moreover, any comparison of different types of records in the sample must be conducted by utilizing the appropriate expansion factor to account for the sampling rate and allow for an apples-to-apples comparison. Also, ARC's concern is somewhat overstated because, in calculating the percentage, it improperly included intermodal movements in the totals.[35]

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[32] Baranowski/Fisher Reply V.S. at 20.

[33] Baranowski/Fisher Reply V.S. at 21.

[34] ARC Opening Comments at 4.

[35] Baranowski/Fisher Reply V.S. at 25-26.

## III. The Board Should Address The Unique Costing Characteristics of Toxic Inhalation Hazards And Other Hazardous Materials.

In its 2010 report to Congress, the Board outlined the tasks that would constitute a basic effort to modify URCS, including revisiting the make-whole adjustment, updating the computer programing that underlie URCS, and exploration of the issues surrounding the costing of TIH and other hazardous materials begun in EP 681, *Class I Railroad Accounting and Financial Reporting – Transportation of Hazardous Materials*. The Board has explained to Congress in its 2014 budget request that the Board "continues to work to update URCS, including migration from legacy software programs like FORTRAN," and referenced the instant proceeding addressing the make-whole adjustment as evidence that making URCS more efficient and accurate remains a key priority of the Board.[36] The Board should also make URCS more accurate by completing the basic update of URCS outlined for Congress and addressing the unique costing challenges that TIH traffic poses. In its opening comments, AECC notes that the Board's decision in FD 35504, *Union Pacific Railroad Company-Petition for Declaratory Order*, "leaves substantial TIH-specific costs and cost-exposure with the railroads that URCS should not cross-subsidize from non-TIH commodities."[37] The AAR agrees and requests that the Board issue a NPR based on the evidentiary record compiled in 2009 in EP 681.

### Conclusion

The AAR supports revising URCS to remove the step-function effect of the make-whole adjustment to the extent specified above. The Board should conduct special studies to accurately account for the efficiencies of higher volume shipments. In the absence of empirical support for the NPR's proposals, the Board should not change the long-standing cost relationships in URCS.

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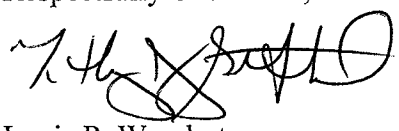
[36] Surface Transportation Board, Budget Request for FY 2014 (2013).

[37] AECC Opening Comments at 13.

Thus, if the Board concludes that the completion of the special studies necessary to develop empirical evidence is impractical, the Board should revise the proposals set forth in the NPR to preserve the existing cost relationships, while smoothing out the distribution of costs for different sized shipments and eliminating the step function effect of the make whole adjustment. The Board should issue the revised proposals for further public comment to allow all interested stakeholders to comment.

Respectfully Submitted,



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Appendix A

Before the

Surface Transportation Board

STB Ex Parte No. 431 (Sub-No. 4)

Review of the General Purpose Costing System

Joint Reply Verified Statement

Of

Michael R. Baranowski

and

Benton V. Fisher

FTI Consulting, Inc.

## I. INTRODUCTION

We are Michael R. Baranowski and Benton V. Fisher, Senior Managing Directors at FTI Consulting. We previously submitted a verified statement in this proceeding – STB Ex Parte No. 431 (Sub-No. 4), *Review of the General Purpose Costing System* – in support of the opening comments of the Association of American Railroads ("AAR") on June 20, 2013.[1] In that statement ("AAR Opening VS"), we evaluated the various adjustments to the Uniform Railroad Costing System ("URCS") that were proposed by the Surface Transportation Board ("Board") in its February 4, 2013 decision ("NPRM"). We have been asked by the AAR to explain further the Board's proposed adjustments and to address items raised by other parties that submitted opening comments in June.

In the AAR Opening VS, we explained that many of the Board's proposed adjustments were unsupported, did not appear to be based on empirical analysis or study of actual data, and would serve to dramatically change long-standing cost relationships. We explained that the Board's goal to eliminate cost-related step functions driven by the URCS efficiency adjustments and corresponding make-whole adjustments should and could be accomplished in a manner that preserves the long-standing cost relationships which, themselves, are based on detailed studies. Notably, the opening comments filed by many other parties – representing shippers and railroads alike – expressed similar concerns. Concerns about the lack of a foundational basis for the Board's proposed changes and with the impacts of these changes were a consistent theme

[1] Details of our background and experience are set forth in Exhibits No. FTI-1 and 2 to that verified statement.

throughout the filings.[2] While we continue to applaud the Board for recognizing the critical importance of URCS costs and for attempting to improve their estimates, we do not support the largely ad hoc modifications set forth in the NPRM.

In our opening comments we explained that our continuing review of the materials provided by the Board might require refinements to our opening comments. In Section II of this statement we supplement and refine accordingly our discussion and analysis of the specific Board proposals presented in the AAR Opening VS based on the results of our continuing review and comments from other parties. In Section III we address certain other comments submitted by parties that differ from positions we have taken here or that introduce topics we have not previously discussed.

[2] *See, e.g.,* ACC Opening comments at 2; WCTL Opening Comments at 2.

## II. DISCUSSION OF BOARD PROPOSALS

The Board's NPRM proposed a major change to the manner in which URCS costs would account for economies of scale. Specifically, the Board would eliminate the efficiency savings and associated make-whole adjustments that have been used to allocate costs for decades, and instead assign costs on a "per-shipment" basis. We explained in the AAR Opening VS that while the Board's goal of removing the "step functions" resulting from the current make-whole process was reasonable, its proposals for implementation were simplistic, unsupported, and would produce less accurate URCS results.

Our ongoing review of the materials made available by the Board for use in this proceeding[3] and other parties' opening comments has confirmed, and in some respects deepened, our concerns. If the Board is intent on eliminating the make-whole adjustments without a detailed study or analysis of actual cost relationships, then it is imperative that it employ an approach that preserves the existing cost relationships on which URCS costs are based. In our Opening AAR VS, we explained how to modify the Board's switching cost proposal to eliminate the make-whole adjustment, while assigning costs in a manner that maintains the cost relationships currently used in URCS. In response to opening comments from others regarding the proposed changes related to per-carload and per-shipment costs in URCS Phase II and further analysis of the Board's workpapers, we re-submit our switching cost allocations, provide additional details on alternative methods to allocate station clerical costs, and identify a mis-

[3] The Board provided certain extracts from the Carload Waybill Sample, the source code underlying the assignment of URCS costs, and illustrative make-whole calculations for a sample universe of shipment records. AAR Opening VS at 5.

allocation embedded in the Board's current make-whole calculations for railroad-owned car costs. We also respond to opening comments regarding the proposals related to locomotive unit minutes (LUM) and discuss the need for the Board to address the unique costs associated with hazardous materials traffic.

A. Switching Costs

The Board's proposed change would significantly alter the assignment of switching costs to shipments.[4] Specifically, the Board would convert the cost per carload – which currently varies in URCS as the size of the shipment changes, to account for the relative efficiencies in switching larger blocks of cars and unit trains – to a single cost per shipment, which the Board assumes would apply indiscriminately to all traffic, regardless of the number of cars being switched.[5] We – along with other commenters[6] – criticized the Board's conclusion that all shipments incur the exact same switching costs and we demonstrated that its unsupported proposed change would disrupt the current URCS costing relationships by assigning much higher

[4] AECC noted that "the largest component associated with the STB's make-whole adjustment is related to URCS switching costs." AECC Opening Comments at 7. We recognize the switching proposal's significance, as switching costs do, in fact, account for the largest portion of costs that are redistributed via the make-whole adjustments. Yet, we also note the considerable impact of the Board's proposed change to the assignment of locomotive unit-mile ("LUM") costs – which do not involve a make-whole adjustment.

[5] While the Board claims that such an approach would "properly reflect . . . economies of scale," its assumption in fact presumes that the economies of scale are infinite, as the costs would remain unchanged across all shipment sizes.

[6] Opening Comments of Alliance for Rail Competition et.al., Verified Statement of Gerald W. Fauth, III at 9.

costs to shipments comprised of a single carload, and dramatically lower costs to shipments of 10 carloads or more.[7] In order to avoid arbitrary and significant shifts to costs, we provided algorithms that would reasonably retain the current balance by allocating a portion of the costs on a per-shipment basis (as the Board proposes to assign all switching costs) and a portion on a per-carload basis.[8]

*i. Hybrid Per-Shipment/Per-Carload Approach to Eliminate Make-Whole*

Our opening calculations estimated that a hybrid approach that assigned switching costs on a 70/30 basis – 70 percent per shipment and 30 percent per carload – would preserve the relative distribution of switching costs assigned to smaller-sized and larger-sized shipments by the URCS process that is currently in place.[9] To demonstrate the feasibility of our alternate approach, we assumed for our calculations that shipment size would correspond with the average number of carloads per waybill as reported in the 2011 Carload Waybill Sample ("CWS"). Also, because of the limited flat-car information in the CWS, we assumed for our calculations that an

[7] AAR Opening VS at 10, and Exhibit No. FTI-4.

[8] AAR Opening VS at 11. Union Pacific Railroad ("UP") also proposed an alternative to the Board's plan to assign the same switching costs across all shipments. As UP's proposal seeks to correct the Board's unsupported assumption that switching costs are constant across shipment size and to incorporate the relative efficiencies of larger shipments as currently captured in URCS, it is similar to the hybrid per-shipment/per-carload approach that we advanced. UP Opening Comments at 8-10.

[9] The workpapers supporting our opening statement included such calculations for each Class I railroad.

intermodal shipment is comprised of 10 intermodal flats.[10] Should these assumptions prove to be inconsistent with the Board's final instructions, the shipment/carload split we calculated would have to be modified accordingly.

In order to show the potential sensitivity of the new shipment-size metric to the shipment/carload split, we re-ran the switching cost calculations from our opening workpapers with one modification. Rather than use the number of cars identified as moving under the same waybill – the Board's proposed definition – we assumed that all carload shipments that were waybilled individually moved instead as 3-car shipments.[11] Under this assumption, the median cost split required to maintain the cost assignment presently used by the Board would shift to 80 percent per shipment and 20 percent per carload. The sensitivity of the shipment/carload split required to maintain the same URCS cost relationship underscores the need for a clear definition of shipment size from the Board.

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[10] The opening comments of BNSF Railway confirm the reasonableness of our estimate, as the carrier identified that in 2012, an average of 12 flatcars were blocked together for movement between ramps. While such information is called for by the proposed new reporting requirements, we highlight that intermodal traffic is handled in larger quantities than are waybilled, and that the cost assignment process must recognize the larger shipment sizes.

[11] For this showing we continued to use 10 flatcars as the assumed intermodal shipment size. We do not believe that most single-car shipments are handled as a contiguous block of 3 cars from origin to destination, and performed this analysis merely to illustrate how the shipment/carload split would have to change in order to preserve the current URCS cost relationships under different shipment-size assumptions.

### ii. *Only a Very Small Portion of Interterminal and Intraterminal Switching Costs Is Assigned to Shipments in the Carload Waybill Sample*

Based on our further review of the materials provided by the Board for use in this proceeding, we are modifying our opening comments regarding one of the components of URCS switching costs, Interterminal and Intraterminal switching. We explained in our opening comments that carriers do not report this type of switching activity, and that the URCS model currently assigned a portion[12] of total switching time – and, as a result, switching costs – to Interterminal and Intraterminal switching, but that the URCS costing process did not assign these costs to any shipments in the Carload Waybill Sample. Based on our continuing review of the supplemental materials provided by the Board and specifically our examination of the "source code" underlying the Board's URCS costing process, we have now determined that a small fraction of these costs is actually assigned to shipments meeting special criteria. We interpret the source code to say that Interterminal and Intraterminal costs would be applied to shipments of less than 9 miles on a carrier. Table 1 below summarizes the Interterminal and Intraterminal SEMs that are assigned to such short movements in the CWS for each carrier, the relative percentage of URCS Interterminal and Intraterminal SEMs actually assigned to shipments, and the residual URCS Interterminal and Intraterminal variable costs that remain unallocated.

[12] Table 1 to our opening statement indicated that URCS assigns in the range of 5-7% of total switching to Interterminal and Intraterminal switching for each Class I railroad.

**Table 1**
**Interterminal and Intraterminal Switching**
**in URCS and in Carload Waybill Sample**

| RR | Total SEM Allocated to Inter- & Intraterminal Switching in URCS Phase II (000s) | Total Inter- & Intraterminal SEM in CWS (000s) | Percent of Inter- & Intraterminal SEM Assigned in CWS | Total Variable Costs Allocated to Inter- & Intraterminal Switching in URCS and Not Assigned in CWS (000s) |
|---|---|---|---|---|
| BNSF | 10,414 | 35 | 0.3% | $115,584 |
| CN | 3,186 | 162 | 5.1% | $5,435 |
| CP | 1,654 | 36 | 2.2% | $11,333 |
| CSXT | 13,906 | 153 | 1.1% | $82,139 |
| KCS | 1,532 | 189 | 12.3% | $4,482 |
| NS | 12,300 | 1,418 | 11.5% | $57,380 |
| UP | 13,394 | 166 | 1.2% | $134,185 |
| **Total** | **56,386** | **2,158** | **3.8%** | **$410,538** |

Table 1 to our Opening VS showed that URCS allocated nearly 1 million hours – representing more than $422 million in variable costs – to Interterminal and Intraterminal switching. In this statement, we refine and correct our original finding and acknowledge that $12 million of the $422 million – 4 percent – is in fact assigned to shipments in the CWS. Our refinement does not change our prior recommendation that the Board address the imbalance between the service units and costs allocated to Interterminal and Intraterminal switching within Phase II and the small portion of those costs that is actually assigned to shipments in the CWS.[13]

[13] In our opening statement, we identified that these allocations are performed in URCS Worktable B6 Part 2A. AAR Opening VS at 13.

### *iii. Allocation of Intertrain and Intratrain Switching Costs*

Intertrain and Intratrain – or "I&I" – switching accounts for intermediate switching and blocking of cars that is performed en route. Accordingly, the URCS model does not assign any such costs to unit trains, and very little to intermodal shipments.[14] In our opening statement, we observed that the Board, in proposing to eliminate the make-whole adjustments, addressed only the I&I switching interval and left unclear how it would redistribute the savings from I&I switching absent a make-whole adjustment. Currently, the URCS Phase II allocates switching minutes to the I&I function by assuming that all traffic receives an I&I switch every 200 miles (loaded or empty) and then, via the make-whole adjustment, redistributes the savings from the elimination of I&I switches for trainload shipments to non-unit train, non-intermodal shipments.[15]

If the Board is committed to removing make-whole adjustments from URCS, then it must address the current process by which I&I SEM are assigned to all carloads in Phase II of URCS, and I&I costs are redistributed via the make-whole adjustment to reflect the Phase III costing assumption that trainload shipments incur no I&I switching.

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[14] In a 1997 decision in an earlier phase of this proceeding, *Review of General Purpose Costing System*, Ex Parte 431 (Sub-No. 3), the STB adopted an interval of 4,162 miles between I&I switch events for intermodal. This distance is more than 20 times longer than the 200-mile assumption for non-unit train traffic; as a result, I&I costs for intermodal are less than 5% of those assigned to carload shipments.

[15] In the AAR Opening VS, we identified that the Board's current URCS process fails to properly incorporate the longer interval between I&I events for intermodal traffic, resulting in the failure to assign all carriers' total switching costs. AAR Opening VS at 20.

B. Equipment Costs for Railroad-Owned Cars

In its NPRM, the Board proposed to eliminate the separate make-whole adjustment associated with efficiencies reflected by URCS for ownership costs associated with railroad-owned freight cars.[16] Rather than propose an alternate allocation metric that attempts to reflect the efficiencies of larger-sized shipments relative to smaller shipments (as it did for switching costs), the Board simply proposed to no longer account for any such efficiencies. The NPRM proposes to assign the same per-car freight car costs to all shipment sizes in railroad-owned equipment.

In our Opening VS, we explained that consistent with our views on SEM and station clerical costs, if the efficiency adjustments and make-whole adjustments for shipments in railroad-owned equipment are eliminated, adjustments should be made to the formulas to maintain the existing cost relationship in URCS between larger-sized and smaller-sized shipments. At the time, we had not yet had the opportunity to unpack the details of the efficiency adjustment savings and corresponding redistribution via the make-whole adjustments and construct an algorithm that would maintain the cost relationship currently reflected by URCS. As we examined more closely the mechanics of the current calculations, we identified an unexpected issue with the calculation of the efficiency-related savings and the redistribution of those savings to non-trainload shipments.

[16] NPRM at 6.

Under the current URCS efficiency savings/make-whole redistribution process, the savings generated from one car type are added back as costs for shipments using different car types. Because the costs for railroad-owned cars are comprised primarily of ownership and lease costs that are specific to individual car types, the make-whole is in effect distributing ownership costs for one car type to shipments using a different car type.[17] Table 2 below summarizes our findings from the 2011 CWS of the railroad-owned freight-car cost savings associated with the efficiency adjustment for one car type, that are redistributed through the make-whole to other car types. The entries in the top half of the table – e.g., boxcars, multilevel flats – are car types that are net "recipients" of costs from other car types. Because the equipment in this recipient group is more likely to move in single-car shipments than in unit trains, it is assigned more costs through make-whole adjustments, including costs from other equipment typically associated with unit-train shipments. The entries in the bottom half of the table – e.g., covered hoppers, plain gondolas – are equipment types with proportionally more unit-train shipments than single cars. Because there are not enough non-unit train shipments in this equipment to absorb the savings, their costs are assigned to shipments in other car types through the make-whole adjustment.

[17] This redistribution is different from the other switching make-whole adjustments, which represent differences in operating costs. Reducing switching costs for unit trains and adding-back make-whole adjustments to single-car shipments reflects the fact that costs such as crews and fuel incurred on the unit trains are lower than those incurred for the single-car shipments. By contrast, the Board's make-whole for railroad-owned cars would take a portion of the ownership costs specific to a carrier's gondolas, and assign them to shipments of boxcars.

**Table 2**
**Railroad-Owned Freight Car Costs Assigned to Other Car Types**
**2011 Carload Waybill Sample**
**($ Millions)**

| *Net Cost Assignment **from** Other Types* | |
|---|---|
| Car Type | Make-whole adjustments Received from Other Car Types |
| Boxcars | $105.1 |
| Equipped Gondolas | $56.8 |
| Flat Cars - Other | $30.5 |
| Refrigerated Boxcars | $25.2 |
| Flat Cars - Multi-Level | $22.6 |
| Other | $0.9 |
| **Total** | **$241.2** |
| *Net Cost Assignment **to** Other Types* | |
| Car Type | Savings Redistributed to Other Car Types |
| Open Top Hoppers | $111.5 |
| Plain Gondolas | $74.2 |
| Covered Hoppers | $38.5 |
| Flat Cars - Intermodal | $16.9 |
| **Total** | **$241.2** |

As we explained as a matter of principle both in the AAR Opening VS and this statement, if the Board seeks to eliminate the make-whole adjustments without performing empirical analyses of the current cost relationships, it must do so in a way that maintains the current cost allocations among shipments, which were based on special studies and have been tested. In light of our finding that the costs for one type of equipment are assigned to shipments using different equipment, however, we do not extend this recommendation to the make-whole for railroad-

owned car costs. This mis-allocation should be addressed by the Board regardless of how it proceeds on the elimination of the make-whole.

C. Station Clerical Costs

In the AAR Opening VS, we explained that the Board's proposal to convert station clerical costs to a per-shipment approach was unsupported, assumed incorrectly that all such costs were independent of the number of cars in the shipment, and would change existing cost relationships. As we proposed for the switching make-whole adjustments, we recommended that the Board use a hybrid approach that recognized that a portion of the station clerical costs varies with the size of the shipment.[18] We have determined that assigning 25 percent of the costs on the basis of shipments and 75 percent on the basis of carloads would preserve the relative assignment of costs between larger-sized and smaller-sized shipments used by URCS today.[19]

As we further examined the assignment of station clerical costs to shipments to develop the proper split of per-shipment and per-carload costs, we determined that another refinement to URCS may be necessary. It is likely that the current URCS approach over-allocates station clerical costs, which are comprised largely of administrative costs, to intermodal shipments. URCS allocates station clerical costs to both carload and intermodal shipments. Administrative expenses reported in Schedule 417 to the R-1 – titled "Specialized Service Subschedule" – are

[18] AAR Opening VS at 16-17.

[19] Our workpapers contain the detailed calculations for each Class I railroad and indicate that the weighted-average split and the median split across carriers in the limited data set examined were each 24/76.

also allocated separately to intermodal shipments. For Schedule 417, carriers are instructed to report expenses exclusive to the handling of specific types of traffic, and the vast majority of the administrative expenses reported to that schedule are associated exclusively with intermodal shipments.[20] URCS assigns these administrative expenses along with other intermodal costs solely to intermodal originations or terminations.[21] Before making any changes to the manner in which URCS distributes station clerical costs to carload and intermodal shipments, the Board should confirm that URCS allocations are aligned with the reporting of expenses in Schedules 410 and 417 of the R-1.

D. Locomotive Unit-Mile Costs

We presented an extensive criticism of the Board's proposed changes to the assignment of locomotive unit-mile costs in the AAR Opening VS.[22] As we explained, the Board's recommended modifications would sever the long-standing and logical relationship between the weight of the shipment and the associated locomotive requirements – without any analysis or empirical support. We also described that the STB's proposed use of a fixed train length of 80 cars to allocate LUM costs for non-unit train shipments would result in an under-assignment of LUM costs for most Class I railroads, and incorrect assignment for all.

We note that other parties similarly criticized the Board's planned change. The American Chemistry Council, the Chlorine Institute, the Fertilizer Institute, and the National Industrial

[20] Intermodal expenses are reported in column (b) "TOFC/COFC Terminal."

[21] URCS Worktable D7 Part 7A.

[22] AAR Opening VS at 21-26.

Transportation League[23] jointly filed comments in the opening round (hereafter "ACC Comments"). Their comments were supported by the Verified Statement of Robert D. Mulholland. ACC et.al. remarked that the Board's proposed change to the assignment of LUM costs "is predicated upon flawed logic," and Mr. Mulholland states that the Board's supposed rationale "misses the point."[24] We agree with ACC's assessment, and also with its witness's observation that shorter trains "will require less locomotive power . . . and will therefore incur less LUM costs than the longer, heavier, train."[25] UP provided further support for this fact:

> Indeed, train tonnage drives UP's assignment of locomotives to trains. . . [I]n general, heavier trains require more locomotives and thus have higher LUM costs than lighter trains. Moreover, heavier trains generally consume more fuel than lighter trains, which is another reason why heavier trains have higher LUM costs than lighter trains.[26]

We stand by the criticisms and concerns regarding the Board's proposal presented in our Opening VS. We provide here a further illustration of the consequences of the Board's unsupported, flawed proposal for unit trains. By eliminating the role of weight in assigning LUM costs, the Board's proposed change would result in assigning relatively more costs to lighter (and shorter) unit trains, and fewer costs to longer, heavier unit trains. Table 3 below summarizes the effects of the proposed change on LUM costs for the four largest Class I carriers. For each one, the LUM costs assigned to all unit trains of coal will be reduced by 5-9% overall, the costs assigned to grain trains will increase by 10-33%, and the costs assigned to other unit

[23] ACC et.al. refer to themselves as the "Interested Parties."

[24] ACC Opening Comments at 10-11, Mulholland VS at 27.

[25] Mulholland VS at 27.

[26] UP Opening Comments at 15.

trains will increase from 30-53%. Shifts of such significant magnitudes not related to correcting clear errors should not be adopted without better explanation, analysis, or testing.

**Table 3**
**Impact of Board-Proposed Elimination of Trailing Weight Adjustment Used to Assign LUM Costs to Unit Trains**

| RR | Coal Trains | Grain Trains | Other Unit Trains |
|---|---|---|---|
| BNSF | -5% | 10% | 30% |
| CSXT | -8% | 33% | 30% |
| NS | -9% | 28% | 37% |
| UP | -8% | 32% | 53% |

E. Costs associated with the Transportation of Hazardous Materials

We note that since the Board sought comments in 2009 from interested parties in EP 681 *Class I Railroad Accounting and Financial Reporting – Transportation of Hazardous Materials*, on whether and how it should update its accounting and financial reporting for Class I rail carriers and refine its URCS to better capture the operating cost of transporting hazardous materials. Because the result of that proceeding may require modifications to the current URCS process to assign costs incurred exclusively in the provision of transportation of hazardous materials to only that traffic, including potentially switching and station clerical costs, and data need to be developed on whether the proposals in the NPRM are warranted, the Board should address the concerns raised in EP 681.

## III. REVIEW OF OTHER PARTIES' COMMENTS

As we mentioned above, the views of other parties participating in this proceeding are consistent with those we have presented. Many took issue with the Board's proposals for lacking

empirical analysis, for being arbitrary, for incorporating flawed assumptions related to switching costs and locomotive costs, and for not testing or validating the results. The Board has not demonstrated that its proposals would assign costs to shipments more accurately than the methodologies underlying the current assignment of URCS costs, which have been reviewed and tested. Some commenters, however, offer alternatives that would increase further the carriers' reporting requirements and reduce the accuracy of the URCS costing results if ever implemented. We have thus been asked to provide our reactions to the other parties' comments and to address and respond to specific elements.

As a general observation, a number of parties that expressed concern with the Board's proposals suggested alternatives that would introduce even more complexity to the calculation of URCS unit costs and the assignment to shipments. Various proposed alternatives – e.g., to report the number of shipments per switch or other statistics separately for unit train and non-unit train shipments by individual car-type, in order to perform more specific calculations – would be more complicated to implement than the STB's proposed conversion to per-shipment costs. Such changes would necessitate further consideration and study on how such information would be used to allocate costs, would require even more extensive re-programming, and could increase the complexity of URCS without a corresponding improvement in accuracy.

A. American Chemistry Council, et.al.

ACC et.al. claim that the Board's proposal to "to develop unit costs in URCS Phase II based on the number of shipments, instead of cars, would create a disconnect with the URCS

variability factors applied to those costs."[27] While we generally agree with the ACC position that the Board should not make changes that would alter existing cost relationships without evidence, the concern about variabilities is misplaced. The Board's proposal to change from assigning costs on a per-carload basis to a per-shipment basis is independent of the calculation of the variability factor, which itself is based on relative yard switching hours and yard track miles, not carloads switched.

B. Arkansas Electric Cooperative Corporation

Arkansas Electric Cooperative Corporation (AECC) presented a series of claims in its comments that merit reply.

*i. Definition of Trainload*

First, AECC relies upon the average size of through trains to challenge the Board's proposal to change the minimum trainload size from 50 carloads to 80 carloads.[28] Specifically, AECC points to average through train lengths in the range of 50-60 cars for some carriers as confirmation that shipments of 50-79 cars are typically unit trains. AECC's comparison is not valid. As 50-60 cars represent the average size, half of a carrier's trains can be expected to be longer. Shipments in the range of 50 to 79 cars account for only 3% of total traffic,[29] and are

[27] ACC Opening Comments at 8.

[28] AECC Opening Comments at 8-10.

[29] The Fauth VS that accompanied the opening comments of the Alliance for Rail Competition et.al. identified that shipments of 50-79 carloads accounted for 1.2 million carloads and $2.1 billion in freight revenues; each measure accounts for 3% of the industry-wide totals of 34

likely to move in larger-than-average through trains. Further, as we observed in our opening statement, increasing the minimum size for unit trains would help accomplish the Board's objective of avoiding the situation where URCS misclassifies as a unit train a shipment that is handled with other shipments.[30] Such a misclassification would lead to the under-assignment of costs to that shipment, and a resulting over-assignment of costs to other, smaller-sized shipments.

*ii. Train and Engine Crews*

Second, AECC argues that train and engine crew costs for unit trains should not vary with the number of cars in the shipment.[31] We are confused by this proposal because we understand that the "change" AECC is recommending actually reflects how URCS currently assigns crew costs to unit-train shipments. No changes are required to implement AECC's request.

*iii. Road Property Depreciation*

Third, AECC claims that road property depreciation costs are mis-assigned to shipments to which they do not apply.[32] AECC complains that URCS is not sufficiently refined to isolate

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million carloads and $82 billion in revenues. *See* ARC Comments at 10 and the Board's "Reference Guide For The 2011 Surface Transportation Board Carload Waybill Sample," at Table 1, page 4 (http://www.stb.dot.gov/stb/docs/Waybill/2011%20STB%20Waybill%20Reference%20Guide%20-%20Final.pdf)

[30] AAR Opening VS at 21.

[31] AECC Opening Comments at 11-12.

[32] AECC Opening Comments at 19.

costs incurred for specific commodities from allocation to other commodities. As examples of the perceived problem, it cites investment related to intermodal terminals, double stack clearances and classification facilities not used by unit coal trains. As a general purpose costing system, URCS does not isolate costs related to specific movements and allocate those cost only to those movements. To do so would require considerably more granular reporting by the railroads with little corresponding refinement in URCS costs, as the Board observed in EP 657 (Sub-No. 1), *Major Issues in Rail Rate Cases*.[33] Instead, URCS attempts to capture the variable costs associated with different types of traffic and tailor those costs to individual movements through operating characteristics entered in Phase III.

Further, AECC's example of investment for intermodal terminals being allocated by URCS to coal shipments is incorrect. All investment and depreciation of intermodal terminal assets are reported to separate road property accounts and assigned only to intermodal originations or terminations.[34] Finally, AECC's references to double-stack clearances and classification facilities, which it argues unit coal trains do not utilize reflect only one side of the coin. Substantial investment is incurred by the railroads to accommodate unit coal train shipments – such as more robust construction standards for lines that handle unit coal trains, including heavier rail, curve stabilization, and 286,000-pound loadings for bridges and structures – but URCS does not assign the costs associated with these assets exclusively to unit coal trains.

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[33] *Major Issues*, at 55.("While URCS does not, by design, reflect the actual costs and efficiencies associated with each specific unit-train coal movement, several
URCS factors integrate the enhanced efficiencies of such movements.").

[34] URCS Worktable D7 Part 7A.

*iv. Return on Road Property Investment*

AECC also recommends that URCS eliminate entirely a critical component of variable costs, return on road property investment.[35] The Board is well aware that freight railroads are among the most capital-intensive operations in the country and that carriers invest billions of dollars each year in their roadway and equipment assets. In determining the variable costs associated with individual shipments, URCS has included the return on investment since its inception.

In its 1987 Final Report, the Railroad Accounting Principles Board ("RAPB") found that the opportunity cost should be determined based on the current cost of capital, in order for the carriers to attract the necessary capital from investors.[36] In a 1989 decision shortly preceding the adoption of URCS, the Interstate Commerce Commission embraced the RAPB's findings.[37]

Moreover, roadway assets are variable with traffic levels, as increased traffic requires carriers to invest in increased track capacity – either double-tracking or adding passing sidings on mainlines, or adding or lengthening tracks in yards. And the asset life for running tracks is typically measured in gross ton-miles – the more traffic that moves over a track, the quicker it is consumed, and has to be replaced. Rather than recognize this basic association between traffic levels and asset investments, AECC attempts to set out a different "purpose and effect" of such investments, seeking to distinguish investment from other variable costs that are incurred. We

[35] AECC Opening Comments at 20-21.

[36] RAPB Final Report, "Volume 2 – Detailed Report," at 33-37.

[37] *Modifications to General Purpose Costing System – GPCS*, 5 I.C.C.2d at 884-885.

disagree with AECC's proposed distinction. AECC fails to challenge the findings of either the RAPB or regulatory agency, let alone identify flaws in their positions. Its unsupported arguments that ignore the variable nature of roadway investments and the long-established precedent carry no weight and should be rejected.

*v. Fuel*

Next, AECC presents a lengthy discussion purporting to support a "demonstrable fuel efficiency advantage for unit trains relative to other traffic," and to create the impression that such fuel efficiencies should be obvious, and therefore adjustments to URCS unit-train costing are required.[38] When AECC's individual assertions are evaluated at a more granular level, it is clear that AECC mischaracterizes the relative efficiency of unit trains, and misrepresents the existing assignment of fuel costs to unit trains in URCS. The first issue relates to AECC's statement that unit trains "tend to be substantially longer, and move cars that are somewhat heavier."[39] The figures that AECC presents in its Table 2 can be used to show that URCS already assigns significantly lower fuel costs per ton-mile to unit trains. AECC concludes correctly that URCS assigns most fuel costs on the basis of LUM – that is, the assumed number of locomotives – and that western region unit trains average 63% more tonnage than through trains.[40] To assign fuel costs to unit trains, however, AECC's table suggests that the average

[38] AECC Opening Comments at 14-19.

[39] AECC Opening Comments at 15.

[40] AECC Opening Comments at 14-15. Multiplying the average number of cars per train by the average number of tons per car from AECC's Table 2 produces average train weights of 9,373 tons for unit trains and 5,737 tons for through trains.

locomotive consist required to move unit trains is only 3% larger than that required for shorter and lighter through trains.[41] In arguing for a further cost reduction, AECC ignores the fact that URCS assigns the same unit cost per LUM to all train types, and thus assumes that for the majority of fuel costs, roughly the same level of costs will be assigned to the average unit train as is assigned to the average through train – despite the fact that the average unit train has 63% more tons. As a result, western region unit trains in URCS are already being assigned 37% lower costs per GTM than are through trains, for the LUM-based allocation.[42] Another way to conceptualize the lower assignment of costs per GTM to unit trains is to recognize that while each car on the average through train is assigned 1/23 of a locomotive (3.0 divided by 69, or 4.3% of the locomotive consist), each car on the average unit train is assigned only 1/36 of a locomotive (3.1 divided by 110, only 2.8%).

AECC is also critical of aspects of the assignment of fuel costs on the basis of GTM. It claims that unit train fuel use is lower than average because "unit trains tend to generate fewer gross ton-miles in the course of moving a given number of net ton-miles."[43] We can agree with AECC's point that unit trains tend to generate fewer gross ton-miles per net ton-mile. But this fact does not provide support for the notion that "further credit" or an additional adjustment to URCS is needed, because *URCS already accounts for this relative difference*. By assigning costs

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[41] AECC Table 2 identifies an average of 3.1 locomotives for unit trains and 3.0 for through trains.

[42] Dividing the unit train/through train ratios of 103% of locomotive costs by 163% percent of tonnage equals 0.63, or 37% lower.

[43] AECC Opening Comments at 17.

on the basis of GTM, and not net ton-miles,[44] the current URCS approach assigns relatively lower costs to unit trains than to other traffic.

By invoking the relationship of gross tons to net tons, AECC gets caught "coming and going." As mentioned above, AECC is correct that the relative increase from net tons to gross tons is lower for unit trains. When presenting the results of fuel studies purported to show significantly more efficient unit trains, however, AECC measures the results in net ton-miles per gallon, and calculates percentage differences using that metric (despite the fact that, as indicated above, AECC correctly observed that no fuel costs are assigned on the basis of net ton-miles).[45] Changing AECC's comparison to evaluate gross ton miles per gallon – which would require a relatively lower increase for unit trains – would serve to reduce the percentage difference, and with it the perception of significantly more fuel efficient operations that are not being captured by URCS.

While evaluating the assignment of GTM-based fuel costs, AECC lodges a separate complaint about URCS's use of average tare weights that reflect both aluminum and steel equipment. We observe that the URCS tare weight for plain gondolas has been consistently falling, and in the 2011 URCS was 25.6 tons – only 2.6 tons higher than the tare weight of "about 23 tons" estimated by AECC for aluminum cars.[46] Based on AECC's estimated lading

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[44] AECC identified that 44% of fuel costs were assigned on the basis of GTM, and none on the basis of net ton-miles. AECC Opening Comments at 14.

[45] AECC Opening Comments at 17.

[46] AECC Opening Comments at 18.

weight of 120 tons, this 2.6-ton difference would account for 3% higher GTM[47] – far short of the 21.6% "full savings" figure by which GTM-related costs would be reduced, as AECC claims.[48] In fact, based on AECC's claim that URCS assigns only 44% of fuel costs on the basis of GTM, the overall impact of the tare-weight difference on fuel costs would be less than 2%.

Finally, in order to generate an estimate of the relative difference in fuel costs between unit trains and "average traffic," AECC simply excludes all fuel costs associated with switching.[49] AECC does not provide any support for this assumption and, importantly ignores the fact that URCS already incorporates significant reductions to switching fuel costs assigned to unit trains. System-average switching costs are reduced by 75% at origin or destination, are reduced by 50% at interchanges, and are eliminated entirely for intermediate switching en route (I&I switching).[50] It is misleading for AECC to ignore the current treatment of switching costs in URCS, while arguing that URCS needs further adjustments to fuel costs.

C. Alliance for Rail Competition et.al.

There is one item from the Verified Statement of Fauth VS accompanying the opening comments of the Alliance for Rail Competition et.al. that warrants a response. Mr. Fauth points to the significant share of shipments in the Public Waybill Sample that are reported as single-car waybills to support certain claims regarding switching. Specifically, he identifies that almost

[47] Total gross tons per carload would be 171 with 25.6-ton cars and 166 with 23-ton cars.

[48] AECC Opening Comments at 18.

[49] AECC Opening Comments at 18-19.

[50] AECC spells out each of these unit-train reductions. AECC Opening Comments at 2-3.

90% of the records in the Public Sample are single-car shipments.[51] One factor contributing to this large proportion is that the universe of records is comprised mostly of intermodal shipments, which are waybilled individually. Another factor is that the share is calculated for the number of sampled records, not the actual volumes represented by the records (i.e., taking into effect the sampling rate). When intermodal traffic is excluded and the sampling factor for records is taken into consideration, it is evident that single-car shipments account for a minority of the total volume represented in the Public Sample.

[51] Fauth VS at 10.

I declare under penalty of perjury that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony.

Executed on September 5, 2013

Michael R. Baranowski

I declare under penalty of perjury that the foregoing is true and correct. I further certify that I am qualified and authorized to sponsor and file this testimony..

Executed on September 5, 2013

Benton V. Fisher